Organic Chemistry II Lap Report

Title preparation of Aspirin

Principle

prepare aspirin by acetylation of salicylic acid

procedure:

1- put 3.45g of S.A in flask ~~gas~~ 3.45g

2- add 3.5ml of acetic anhydride

3- add 2 drops from H_2SO_4

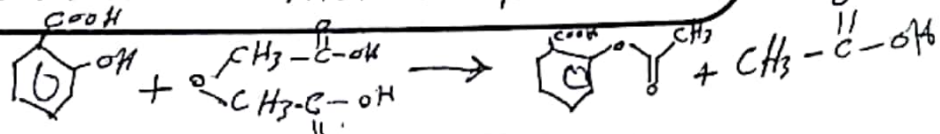
4- heating until dissolve

5- add 20ml of cold water then filter the product

3.5 g.ml

5g

Few drop H_2SO_4



Characteristic

1- white crystals powder

2- Slightly soluble in water

3- less stability and more reactive

4- Hydrolysis in water to → S.A + A.A

5- M.P = 130 - 135 °C

6- can be react as base or acid.

Calculation

salicylate → aspirin

138 → 180

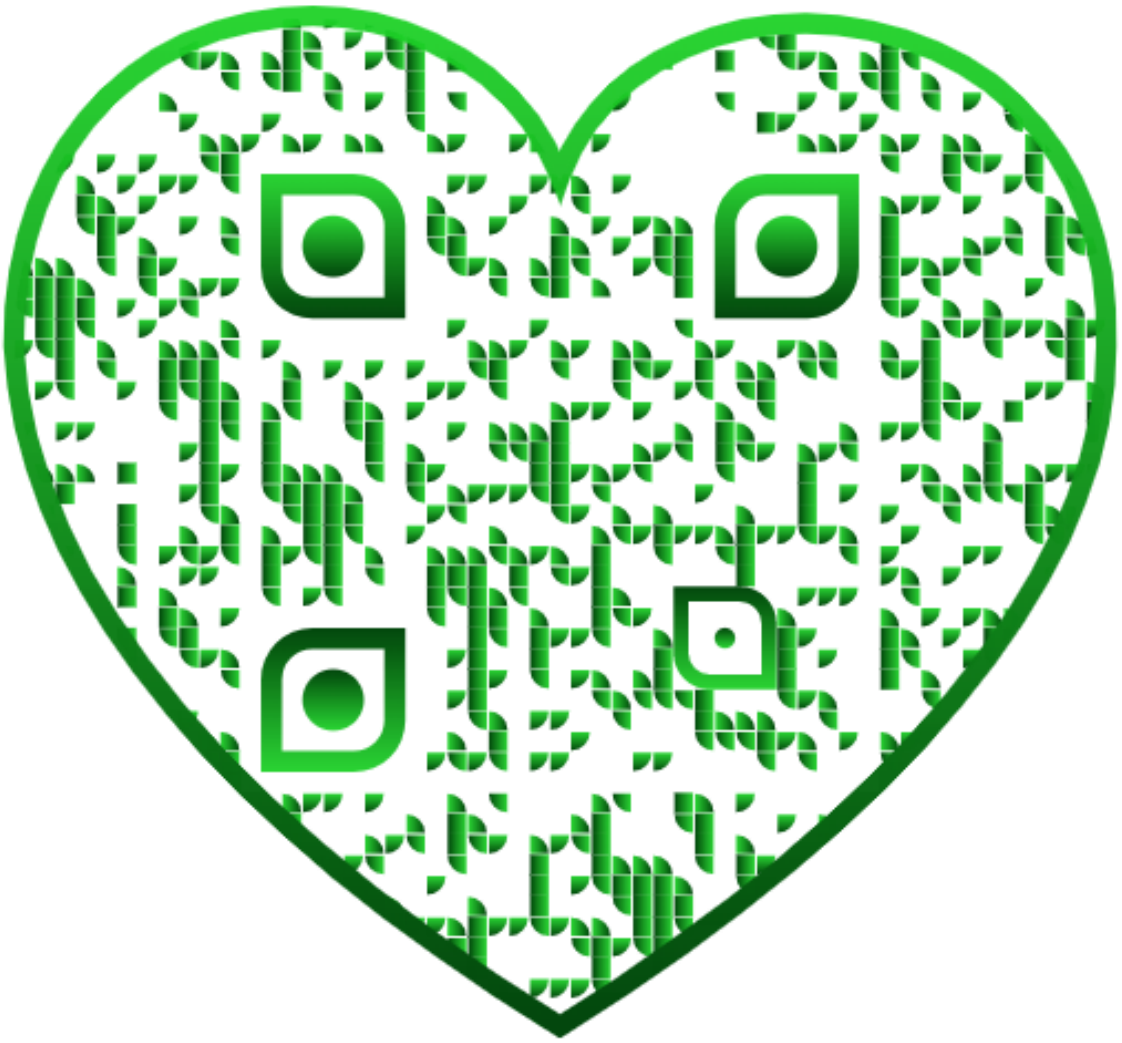
3.45 → X → X = 4.5 g

yield = $\frac{3.78}{4.5} \times 100\% = 84\%$

Name Rezg Alsunsa

Edreess Abdollah Aidan

تحت اشراف عبد الله الهاشمي

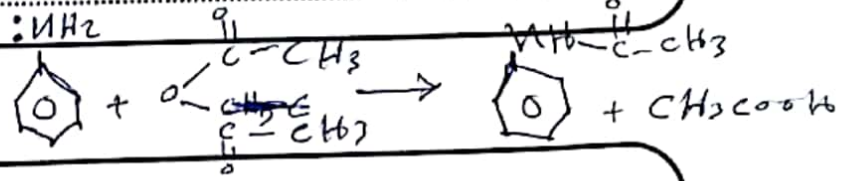


Organic Chemistry II Lap Report

Title preparation of acetanilide

Principle

synthesis acetanilide by reaction of aniline an A. anhyd
1. take 1 ml of aniline to clear beaker
2. add 4 ml HCl and 25 ml in beaker A = Dry Ice
3. dissolve 16.5 g of sodium acetate in 20 ml in beaker B
4. add 13 ml of Acetic anhydrate to (A) and immediately pour
sodium acetate from B to A and stirring with glass rode



Characteristic

Calculation

aniline C_6H_7N	acetanilid C_8H_9ON
93	135
10	X

$X = 14.5\ g$

$$\text{Yield} = \frac{\text{paracical}}{\text{theoritical}} \times 100$$

$$= \frac{12}{14.5} \times 100 = 85.7\ \%$$

Name Reem Alyami

Express Abdullah Aidar

تحت اشراف د/ عبد الله الهاشمي

Organic Chemistry II Lap Report

Title Preparation of Hexamine

Principle

Prepare of Hexamine Prodrug by reaction of formaline with ammonia -

1- take 4 ml of formalin 37% and add 5 ml of ammonia - with stirring

2- heating to evaporation -

$6\ H-C(=O)-H + 4\ NH_4OH \longrightarrow (CH_2)_6N_4 + 10\ H_2O$

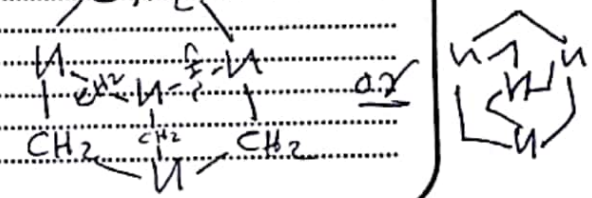
Characteristic

1- White powder.

2- soluble in water

3- odorless

4- M.P = ??



cyclation of Hexamine

Calculation

formaline	Hexamine
$6\ H-C(=O)-H$	$(CH_2)_6N_4$
180	140
1.48	X

X = 1.15 g

37 ——— 100 ml

X ——— 4 ml

X = 1.48

Yield = $\frac{1.15}{1.5} \times 100 = 95.6\ \%$

Name Reza Alsumeri

Edreess Abdullah Aidan

تحت اشراف د/ عبد الله الهاشمي

Organic Chemistry II Lap Report

Title Iodoform preparation

Principle

prepare Iodoform by react aceton with Iodine.
1- take 3ml of aceton and add it to 0.5g I_2 of Iodine.
2- add NaoH drops until pale Yellow ppt.
3- Allow for 5 min and filter and dry and weight.

Characteristic

$CH_3\overset{O}{\overset{\|}{C}}-CH_3 + I_2 + NaOH \rightarrow$ Yellow PPt

- Yellow Crystals (Triiodomethan)
- Insoluble in water
- Characteristic odor

Calculation

$3I_2$ (Iodin) → CHI_3 (Iodoform)

$3 \times 127 \times 2$ → $12+1+127 \times 3$

762 → 394

0.5g → X → X = 0.259

Yield = $\frac{0.5}{0.259} \times 100 = \%$

Name Rezq Alyami

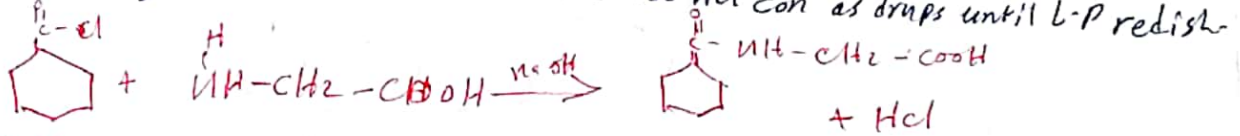
Edress Aidan

تحت اشراف د/ عبد الله الهاشمي

* Title : synthesis of Benzoyl glycine.

* PURPOSE of EXPERMENT :
1- to formation of Benzoyl glycine by reaction of glycine and benzoyl chloride.
2- recrystalization of product.
3- Determine Powder purity.

A- dissolve 5g of glycine in 50mL NaOH 10% in flask.
- add 9 ml of benzoyl chloride as 2mL slowly.
- close the flask and shake will until all Benzen chloride reacted
- pure the contents from flask to beaker and the flask with little water.
- add few grams of crushed ice and add Hcl con as drops until L.P redish
- filter and.



140.5 75.07 179.78

Properties :
It insoluble in water

Calculation :

glycine ⟶ Benzoyl glycine
75 ⟶ 179
5g ⟶ X

$X = \frac{179 \times 5}{75} = 11.9\ gm$

$\%Yield = \frac{5.75\ g}{11.9} \times 100 = 48.3\ \%$

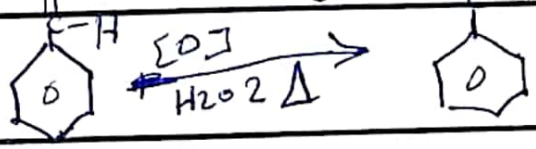
مرفق السنة
عبد الخالق البياري
ام رسين عبد الله
مدرس الكيمياء

Principle

oxidize benzaldehyed by using hydrogen peroxide or Chlorox.

1- 10 ml benzaldehyed + 5 ml glacial acetic acid in flask and add magnetic stirrer and heat gently on stirrer hot plate.

2- add H2O2 5 30% 6.6 ml each 2 min. and waiting for 45 min and cold it then filter and weight



Characteristic

1- white crystaline powder

2- slightly soluble in water.

Calculation

benzaldehyed (C_7H_6O) → benzoic acid ($C_7H_6O_2$)

m.wt 106 → 122

d = 1.04

m = d × v = 1.04 × 10

m = 10.4 g

10.4 g → X

$X = \frac{10.4 \times 122}{106} = 11.9$ g

$Yield = \frac{practical}{theoritical} \times 100 = \frac{7}{11.9} \times 100 = 58.8\%$

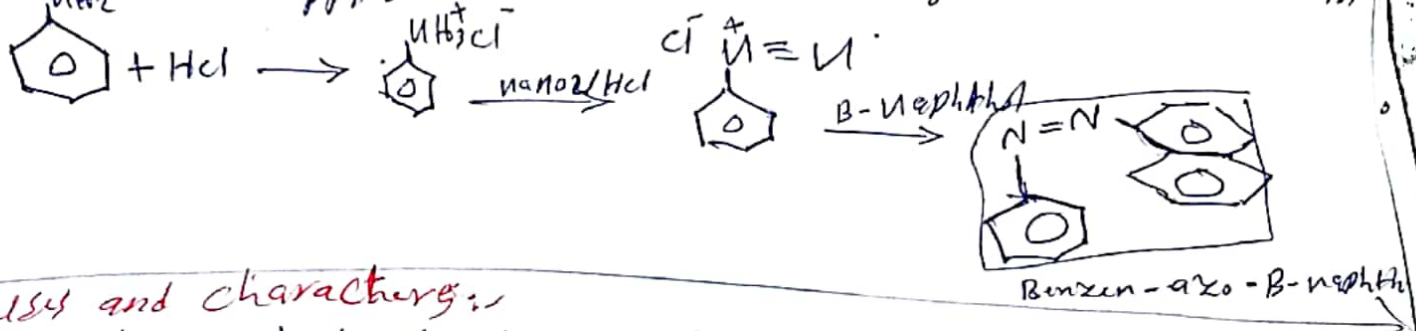
Name Reem Alsumait

تحت اشراف د/ عبد الله الهاشمي Edreess Abdullah Aidaa

Title: synthesis of Benzen-azo-2-Naphthol

Principle:- synthesis sudan 1 dye by Diazatizabron coupling reaction of aniline and B-naphthol and recrystalize the produeb. by.

- Add 3.92 ml ~~4~~ ml aniline + 12.8 ml conc HCl in beacker (A) and cooling it in the ice water bath.
- add 3.2 gm of NaNO2 and add 15 ml of cold water in beaker (B)
- Pour Beaker B to A. and cool.
- add 6.24 gm B-naphthol with 40 ml of NaOH. and cool ~~for~~ 3min
- trasfer beaker A to beaker C and mixing will and cool for 3min
- Silter the ppt.



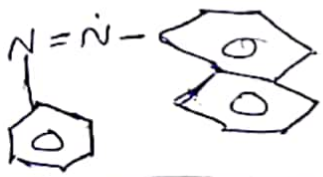
Uses and characters:-

1- Used as Coloring Agent 2 acb as dye for many matrin fabrs.

3- Process as clothes Chemicals.

Calculations:-

B-Naphole ⟶ Azo dye.



$C_{10}H_8O$ ⟶ $C_{16}H_{12}ON_2$

144 ⟶ ~~216~~ 248

6.24 g ⟶ X g

$X = \frac{248 \times 6.24}{144}$

$X = \boxed{10.75\ gm}$

$\text{Yield} = \frac{\quad}{10.75} \times 100 =$